NICE National Institute for Health and Care Excellence

2018 surveillance of delirium: prevention, diagnosis and management (NICE guideline CG103)

Surveillance report

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Surveillance decision

We will not update the guideline on delirium: prevention, diagnosis and management (NICE guideline CG103).

Reasons for the decision

The majority of new evidence found supported the current guideline recommendations. New evidence was found on the use of ear plugs for sleep promotion and reducing delirium in hospitalised patients, however the current recommendations on sleep promotion were deemed to be sufficient.

A body of evidence was identified focusing on dexmedetomidine sedation for the prevention of post-operative delirium. The majority of studies compared dexmedetomidine with a placebo rather than other sedatives. One systematic review compared dexmedetomidine with propofol, midazolam and lorazepam and found no evidence for dexmedetomidine reducing delirium. As such further studies are required that compare dexmedetomidine with alternative sedatives before this area can be considered for inclusion in the guideline. Additionally, a screening tool, the 4 A's test, was highlighted by a stakeholder during consultation as an instrument used in units to screen people for delirium. We recognise this is an area of increasing interest and are aware of an NIHR study on the Development and validation of the 4AT tool. We are awaiting publication of this study so we can consider if there is an impact on the current recommendations when results are available.

For further details and a summary of all evidence identified in surveillance, see appendix A.

Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in delirium: prevention, diagnosis and management (NICE guideline CG103) remain up to date.

The surveillance process consisted of:

- Initial feedback from topic experts via a questionnaire.
- Literature searches to identify relevant evidence.
- Assessing the new evidence against current recommendations and deciding whether or not to update sections of the guideline, or the whole guideline.
- Consulting on the decision with stakeholders, except if we propose to update and replace the whole guideline.
- Considering comments received during consultation and making any necessary changes to the decision.

For further details about the process and the possible update decisions that are available, see ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual.

Evidence considered in surveillance

Search and selection strategy

We searched for new evidence related to the whole guideline.

We found 92 studies in a search for randomised controlled trials (RCTs) and systematic reviews published between 5 August 2014 and 1 May 2018.

We also included:

- 3 relevant studies from a total of 20 identified by topic experts
- 72 studies identified by search in previous surveillance in 2012 and 2014
- 1 study identified in comments received during consultation on the 2018 surveillance decision.

From all sources, we considered 166 studies to be relevant to the guideline.

See appendix A: summary of evidence from surveillance for details of all evidence considered, and references.

Ongoing research

We checked for relevant ongoing research; of the ongoing studies identified, 7 studies were assessed as having the potential to change recommendations; therefore we plan to regularly check whether these studies have published results, and evaluate the impact of the results on current recommendations as quickly as possible. These studies are:

- RECOGNISE: Using a Cerebral Oximeter monitoring device to identify and reduce postoperative complications in cardiac surgery
- Pharmacological interventions for the treatment of delirium in critically ill patients
- Benzodiazepines for treatment of delirium in non-ICU settings
- Processed electroencephalogram indices for amelioration of postoperative delirium and cognitive dysfunction following non-cardiac and non-neurosurgical procedures
- Non-pharmacological interventions for managing delirium in hospitalised patients
- Cholinesterase inhibitors for the treatment of delirium in non-ICU settings
- Protocol for validation of the 4AT, a rapid screening tool for delirium: a multicentre prospective diagnostic test accuracy study

Intelligence gathered during surveillance

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline. For this surveillance review, topic experts completed a questionnaire about developments in evidence, policy and services related to NICE guideline CG103. We sent questionnaires to 11 topic experts and received 6 responses. The topic experts either:

- participated in the guideline committee who developed the guideline
- were recruited to the NICE Centre for Guidelines Expert Advisers Panel to represent their

- specialty.

For this surveillance review topic experts completed a questionnaire about developments in evidence, policy and services related to the guideline. The main areas that they highlighted for potential update included:

- concerns over the recommendation of haloperidol for treatment of delirium as, at the time it was not licensed for the over 65 age group
    - haloperidol is now licensed for this age group. An editorial amendment will be made to reflect this
- updating the risk factors (to consider revising age cut off and including the following risk factors: any significant fracture, previous delirium episode, medication use and surgery)
    - the evidence found on risk factors supported the current recommendations, as such no changes will be made at this time
- making medication review a priority intervention to help prevent delirium
    - medication review is already recommended in section 1.3 – interventions to prevent delirium. Recommendation 1.3.3.7 states "Carry out a medication review for people taking multiple drugs, taking into account both the type and number of medications"
- the guideline recommendations currently state to use version 4 of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) for delirium diagnosis criteria. A topic expert highlighted that this has now been replaced by DSM-V
    - stakeholders agree that DSM-IV should be replaced by DSM-V in recommendation 1.5.1, an editorial amendment will be made to reflect this.

Other sources of information

We considered all other correspondence received since the guideline was published.

Investigation of urinary tract infections

A query was raised regarding delirium diagnosis in catheterised patients, stating that patients in this group should first be tested for urinary tract infections before a diagnosis of delirium is made. No new evidence was found to suggest altering recommendation 1.3.3.4 which states: address infection by avoiding unnecessary catheterisation.

Haloperidol

A query related to the use of haloperidol for the treatment of delirium (recommendation 1.6.4), stating that it is not currently licensed and may increase the risk of falls. Since this issue was raised, haloperidol is now licensed for this indication. Our surveillance review found no evidence for an increased risk of falls. The guideline recommends haloperidol only once all other options have failed, as such there is no cause to change the recommendation at this time.

Views of stakeholders

Stakeholders are consulted on all surveillance decisions except if the whole guideline will be updated and replaced. Because this surveillance proposal was to not update the guideline, we consulted on the proposal.

Overall, 7 stakeholders commented. Two stakeholders agreed with the proposal not to update the guideline, 1 did not answer and 4 disagreed. Stakeholders included royal colleges and professional associations.

DSM-V criteria

The guideline recommendations currently state to use DSM-IV to confirm a diagnosis of delirium. Topic experts highlighted that this was outdated and a new version, DSM-V was now available. We consulted stakeholders to consider if we should now refer to the updated DSM-V criteria in our recommendation. Seven stakeholders answered this question and all agreed that we should replace DSM-IV with DSM-V in recommendation 1.5.1. An editorial amendment will be made to recommendation 1.5.1 to replace DSM-IV with DSM-V.

Screening tools

Stakeholders raised that new screening tools were available that should be considered for inclusion in the guideline. This included the 4 A's test (4AT). The guideline does not currently suggest any delirium detection tools, however it does list the confusion assessment method and DSM criteria for confirmation of delirium diagnosis. Recommendation 1.2 also states to assess cognitive function. This could be performed using one of the mentioned screening tests. As no new evidence was found at this surveillance review regarding screening tools, this area will not be updated at this time. We are aware of an NIHR study awaiting publication in this area and will consider the impact on the guideline once the results are available.

Antipsychotic use

A Cochrane review (Burry et al. 2018) was highlighted by 2 stakeholders regarding the use of antipsychotics in patients with delirium, which was published after our search dates for this surveillance review. As this review stated the evidence found was of low or very low quality it will not have an impact on the current recommendations, however the review has been summarised and added to the evidence summary for this surveillance review.

Risk factors

Stakeholders suggested that multiple medication use represents a risk factor for delirium. It is mentioned in recommendation 1.3.3.7 that medication reviews should take place if patients are taking multiple medications. It was also raised that patients undergoing major surgery, particularly emergency surgery were at risk of delirium. However the evidence found at this surveillance review was mixed and as such insufficient to recommend changing the recommendations at this time. We will also add a cross-referral to the NICE guideline on medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes.

Prevention in surgical patients

A stakeholder raised that dexmedetomidine for the prevention of post-operative delirium should be considered, especially as surgery represents significant hospital workload. Evidence was found which supports the use of dexmedetomidine in surgical patients however the majority of RCTs compared dexmedetomidine with a placebo rather than other sedatives. One systematic review compared dexmedetomidine with propofol, midazolam and lorazepam and found no evidence for dexmedetomidine reducing delirium. As such further studies are required that compare dexmedetomidine with alternative sedatives before this area can be considered for review.

Stakeholders also raised that anaesthesia should be covered by the guideline as it is directly relevant to surgical outcomes as part of the peri-operative care of the patient. It was also raised the bispectral index (BIS) guided anaesthesia has beneficial outcomes for delirium patients and as such this should be included in the recommendations. Evidence was found at the surveillance review which supports BIS guided anaesthesia for the prevention of post-operative delirium. NICE has developed diagnostics guidance on assessing 3 electroencephalography (EEG)-based depth of anaesthesia monitors – Bispectral Index (BIS), E-Entropy and Narcotrend-Compact M. We will add a cross-referral to this guidance from the overview page of NICE guideline CG103. The diagnostics guidance recommends the use of BIS guided anaesthesia.

See appendix B for full details of stakeholders' comments and our responses.

See ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual for more details on our consultation processes.

Equalities

No equalities issues were identified during the surveillance process.

Editorial amendments

During surveillance of the guideline we identified the following points in the guideline that should be amended.

- We will add the following cross-referral to the overview page of the guideline. For guidance on bispectral index guided anaesthesia please see the NICE diagnostics guidance on depth of anaesthesia monitors – Bispectral Index (BIS), E-Entropy and Narcotrend-Compact M.
- The 'think delirium' statement at the start of the recommendations section will have the following cross-referral added. For recommendations on delirium in palliative care please see the NICE guideline on care of dying adults in the last days of life.
- Recommendation 1.3.3.7 will include the following cross-referral as a relevant guideline has now been published. For information on medicines optimisation see the NICE guideline on medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes.
- In recommendation 1.3.3.10 the information about sleep hygiene is no longer included in the NICE guideline on Parkinson's disease in adults, so we plan to remove the footnote.
- Recommendation 1.5.1 currently states to confirm delirium diagnosis using DSM-IV. This will be replaced with DSM-V and read, "If indicators of delirium are identified, carry out a clinical assessment based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) criteria or short confusion assessment method (short CAM) to confirm the diagnosis".
- Recommendation 1.6.4, footnote 7 states that haloperidol and olanzapine do not have UK marketing authorisation for delirium treatment, however haloperidol does now have marketing authorisation. Olanzapine will be removed from recommendation 1.6.4 to follow the process set out in developing NICE guidelines: the manual as the clinical need can now be met by a licensed product. Footnote 7 will be removed because it no longer applies to haloperidol.

Overall decision

After considering all evidence and other intelligence and the impact on current recommendations, we decided that no update is necessary.

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